

## Claims

1. Method for controlling the transmission of data, via data links which are assigned to different applications, over a transmission medium in a network, in particular a local one, with at least two stations designed for data transmission, where the applications are assigned different priorities together with different parameters to identify a quality of service, characterized in that the establishment by a first station of a new data link, assigned to a first application, is restricted as a function of the available free channel capacity on the transmission medium together with the occupancy of the transmission medium by existing data links, for which the applications have a priority corresponding to that of the first application.

2. Method in accordance with claim 1, characterized in that

- a) for an existing request for the establishment of a new data link, the first station determines whether a measure of the available free channel capacity corresponds to a measure of the necessary channel capacity given by the parameters of the first application, with at least part of any data traffic which is assigned to applications with lower priority than the priority of the first application being considered, in the context of the determination procedure, to be free channel capacity, and if the result of the determination is positive, the data link is established,
- b) if the result of the determination is negative the establishment of the data link is suspended, at least temporarily.

3. Method in accordance with claim 2, characterized in that the channel capacity is regarded as free up to the point where

a threshold is reached, with this threshold corresponding to a relative fraction of the data traffic which is assigned to applications with a lower priority.

4. Method in accordance with claim 1, characterized in that

- a) when there is an existing request for the establishment of a new data link by the first station, the data link is established without regard for the current utilization,
- b) if the transmission medium is occupied by data links assigned to an application with at least a second priority corresponding to that of the first application, at least one of the second stations which are maintaining these links signals in such a way that on the transmission medium a message is communicated with the highest priority to the first station,
- c) after it has received the message, the first station suspends the new data link, at least temporarily.

5. Method in accordance with one of the claims 2 to 4, characterized in that if the result of establishing the link is negative, a delay time is set after the expiry of which steps a) to c) are repeated.

6. Method in accordance with claim 5, characterized in that after each repetition the delay time is increased by a discrete value.

7. Method in accordance with claim 5 or 6, characterized in that the repetitions continue until either the establishment of a data link is permitted or the attempt to establish it is finally halted by a termination condition.

8. Method in accordance with claim 5 or 6, characterized in that the duration of the suspension before steps a) to c) are repeated can be prescribed as part of the message by the second station as a function of an assessment of the second data link.